Topics	FS2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Plants	Exploring plants in the environment; observing growth; planting seeds; noticing	Identify and name common plants; identify deciduous & evergreen trees; basic	Observe & describe how seeds/bulbs grow; conditions for growth; simple plant life cycles	Observe & describe how seeds/bulbs grow; conditions for growth; simple plant life cycles	Classification links; comparing environments for plant growth (cross-topic).	Life cycles of plants; reproduction in flowering plants.	Classification of plants; adaptation of plants to environments; links to evolution.	Cells → multicellular plants; photosynthesis intro.	Leaf adaptations; limiting factors; ecosystems.	Global photosynthesis; carbon cycle; advanced ecology.
Curriculum Adaptation	* Use real objects, planting activities, sensory exploration, picture sequencing, simple vocabulary mats, EAL visuals, guided talk frames ("Plants need ___ to grow"). * Provide pre-drawn diagrams, matching			* Provide scaffolded diagrams for roots/stem/leaves; sentence starters for explaining functions; labelled photos for EAL. * Use hands-on investigations with simplified data tables. * For higher achievers: depth tasks on adaptation, pollination				* Support understanding of photosynthesis equations with colour-coded symbols, modelling, and graphic organisers. * Provide structured enquiry templates. * Extension: limiting factor graphs, ecology		
Animals Including Humans	Identifying animals; sorting by features; body parts; healthy	Identify common animals; herbivore/carnivore/omnivo	Offspring → adult; basic needs for survival; exercise, diet,	Nutrition; skeletons & muscles; how bodies move.	Digestive system; teeth; food chains; predators & prey.	Human life cycle; puberty; changes as humans grow older.	Circulatory system; heart, blood vessels; lifestyle impact;	Cells, tissues, organs; body systems.	Health, disease, immunity.	Genetics; DNA; human biology.
Curriculum Adaptation	* Use role-play, body-part models, real photos of animals, simple classification using pictures. * Scaffold food-chain building with arrows and pictorial cues. * Provide simple "healthy/unhealthy" sort			* Use large-scale models for skeleton, muscles, digestive system. * Provide writing frames for explanations. * Tiered investigations: simple observations for ALN; extended written analysis for high-attainers.				* Simplify complex diagrams (heart, blood vessels, reproductive system). * Use chunked reading for disease/immunity/genetics content. * Higher depth: DNA modelling, inheritance		
Living Things & Habitats	Exploring local habitats; animals in environments; simple	Seasonal observations of plants/animals (linked with	Habitats & microhabitats; dependency between living/non-	Renewable and non-renewable resources; how	Classification using keys; positive/negative environmental	Life cycles of mammals, insects, amphibians, birds;	Classification system; microorganisms; adaptation &	Interdependence; ecosystems.	Biodiversity; human impact; adaptations.	Population change; climate impact; evolution.
Curriculum Adaptation	* Use local environment walks, photo-based sorting, simple grouping ("lives in water/land"). * Provide simplified microhabitat charts.			* Scaffold classification keys with visual prompts. * Tiered tasks: ALN use 2-choice keys; HA design their own branching keys. * EAL: habitat vocabulary mats.				* Provide sentence stems for adaptation, evolution, and inheritance explanations. * Use slow-release modelling of ecological pyramids and cycles. * Extension: population graphs, human impact		
Materials / Matter / States	Exploring materials through senses; simple properties; melting/freezing; testing	Naming everyday materials; describing simple physical properties;	Suitability of materials for uses; bending, twisting, squashing; changing shape	Comparing rocks; fossils; soil composition (cross-unit with rocks).	States of matter (solid/liquid/gas); heating & cooling; evaporation & condensation;	Properties of materials; reversible/irreversible changes; dissolving; filtering;	Light & electricity materials links; irreversible changes in real-life	Particle model; atoms, elements, compounds.	Atomic structure; periodic table; bonding intro.	Chemical reactions; energy changes; rates.
Curriculum Adaptation	Sensory exploration; sorting large objects; melting/freezing experiments with clear teacher modelling. Picture-based property charts.			Scaffold particle diagrams; use hands-on reversible/irreversible examples. Provide simple experiment templates; EAL glossaries. HA: explain dissolving using particle models.				Use partially complete particle diagrams for ALN; support abstract atomic structure with dual-coding. Tier tasks: ALN complete simple matching; HA balance equations/use energy profile		
Seasonal Changes	Observing weather & changes; day/night; clothing for seasons.	Weather patterns across seasons; temperature/light changes;	Reinforced through living things and plant growth.	Reinforced in other units (plants/habitats).	Water cycle (seasonal impact).	Climate & environmental impact (cross-topic).	Application when studying adaptation.	Earth's movement; seasons.	Climate systems.	Earth science & atmosphere.
Curriculum Adaptation	Use sequencing pictures, weather charts, clothing role-play. ALN: simple yes/no questioning.			Reinforce seasons during other units using repetition and videos. EAL: embed vocabulary in routines ("longer days", "shorter days").				Link seasonal change to climate/changing Earth models with scaffolded graphs.		
Forces	Pushes/pulls; rolling/sliding; experimenting with movement.	Pushes/pulls observed informally.	N/A	Magnetic forces; contact vs non-contact; friction; comparing strength of forces.	Sound vibrations link to forces; water cycle & gravity.	Forces including gravity, air resistance, water resistance; mechanisms (gears, levers, pulleys).	Application of forces in real-world contexts; scientific investigation skills.	Forces; Hooke's Law.	Speed, motion graphs.	Newton's Laws; acceleration; F=ma.
Curriculum Adaptation	Hands-on pushing, pulling, sliding, rolling activities. Use play-based ramps and balls. EAL: action verbs ("push", "pull", "roll").			Use concrete apparatus (magnets, ramps); simplified force diagrams. ALN: tick-box predictions; HA: multi-step reasoning on friction/air resistance.				Scaffold calculations with formula triangles; support vector diagrams with modelling. HA: solve multi-step motion problems; ALN: simplified graphs.		

Light	Light/dark exploration; shadows in play contexts.	N/A	N/A	Light sources; reflection; how shadows form; transparency/ opacity.	N/A	Sun as a light source; Earth/Sun relationships (space link).	Light travels in straight lines; reflection/refraction; how eyes see; shadows explained.	Reflection/refraction basics.	Colour, filters; lenses.	EM spectrum; wave equations.
Curriculum Adaptation	Shadow play, torches, light/dark exploration. Use silhouette cards.			Scaffold ray diagrams step-by-step. Provide pre-drawn shapes for reflection/refraction experiments. HA: investigate colour dispersion.				Model ray diagrams using overlays; scaffold lens equations; support abstract ideas with animations. Extension: EM spectrum applications.		
Sound	Listening walks; identifying sounds; exploring loud/quiet.	N/A	N/A	N/A	Pitch, volume, vibrations.	N/A	Applied Investigations	Sound waves; frequency; amplitude.	Wave behaviours; absorption.	Sound equations; applications.
Curriculum Adaptation	Shadow play, torches, light/dark exploration. Use silhouette cards.			Scaffold ray diagrams step-by-step. Provide pre-drawn shapes for reflection/refraction experiments. HA: investigate colour dispersion.				Model ray diagrams using overlays; scaffold lens equations; support abstract ideas with animations. Extension: EM spectrum applications.		
Electricity	Simple circuits in play.	N/A	N/A	Simple circuits; switches; conductors.	N/A	Series circuits; power; symbols.	Application of electricity in real-world systems; components; circuit investigation.	Current, voltage, resistance.	Parallel circuits; resistance.	Ohm's law; power; domestic circuits.
Curriculum Adaptation	Simple circuits using large-scale toys and battery packs.			Provide circuit symbol charts; partially complete circuit diagrams. ALN: real circuits before diagrams.				Scaffold Ohm's law calculations; use circuit modelling software; support abstract thinking with colour-coded steps. HA: multi-loop circuit challenges.		
Earth & Space	Night/day; sun/moon; shadows.	Seasonal changes (Earth's movement).	N/A	N/A	Water cycle & natural processes.	Earth, Sun & Moon; solar system; day/night; shadows; orbits (model-based).	pplication: satellites, solar energy, scientific modelling.	Solar system basics.	Gravity; orbits; satellites.	Universe, galaxies; red-shift.
Curriculum Adaptation	Day/night role-play; moving sun cards; shadows.			Provide models (balls, torches); scaffold orbit diagrams.				Simplify gravitational models; scaffold red-shift explanations; HA explore cosmology further.		
Rocks / Fossils / Soil	Exploring stones, sand, mud; texture.	N/A	N/A	Types of rocks; fossils; how soil is formed.	Link to environments & states.	Environmental dependence on geological features.	Application in inheritance.	Structure of Earth.	Resources & sustainability.	Geological processes.
Curriculum Adaptation	Texture sorting; real samples; sensory exploration.			Provide magnifiers, labelled diagrams, matching activities. HA: fossil formation explanation.				Scaffold rock-cycle diagrams; HA apply geological processes in written explanations.		
Chemical Reactions	Simple changes (melting, mixing).	N/A	N/A	Heating/cooling rocks.	Evaporation/condensation.	Reversible/irreversible changes.	Real-life chemical changes.	Combustion; reactions; equations.	Reactivity; acids/alkalis; salts.	Rates; catalysts; energy changes.
Curriculum Adaptation	Mixing, melting, small changes observed visually.			Very scaffolded reversible/irreversible experiments.				Gradual release for balancing equations; provide model examples; HA: exo/endo energy profile evaluations.		
Energy	Warm/cold; sun heat.	N/A	N/A	Light & heat links.	Electricity & heat transfer.	Renewable & nonrenewable energy.	Scientific applications.	Energy stores; transfers.	Conduction, convection, radiation.	Efficiency; energy calculations.
Curriculum Adaptation	Compare hot/cold; simple experiences with sun/heat.			Scaffold diagrams for conduction/convection/radiation. ALN: fill-in-the-blanks.				Provide formula triangles for energy calculations; HA: efficiency comparisons.		
Waves	Exploring sound/light.	N/A	N/A	Light only.	Sound.	Space/solar radiation links.	Applied optics.	Wave properties; sound/ light basics.	Sound & light behaviours.	Wave equations; EM spectrum.
Curriculum Adaptation	Practical exploration only.			Concrete models; simple diagrams.				Stepwise introduction to wave diagrams; HA calculate wave speed.		

Working Scientifically Skills	Observing closely; using senses; asking simple questions; exploring how things work; simple tests.	Asking questions; observing; identifying & classifying; simple data collection.	Noticing patterns; comparing tests; recording data (charts/pictures).	Using scientific enquiry; fair tests; measuring using standard units.	Recording data in tables/graphs; using keys; presenting findings using scientific vocabulary.	Planning investigations; controlling variables; recording complex data; conclusions.	Designing full investigations; identifying causal relationships; evaluating methods.	Observing, questioning, simple planning, recording data, graphing.	Fair testing; variables; reliability; pattern analysis.	Full investigations; evaluating methods; accuracy, precision, validity.
Curriculum Adaptation	Teacher-guided questioning; simple observations.			Scaffold investigation planning with pre-filled templates; ALN: small-group guided inquiry.				Provide investigation frameworks; scaffold graph plotting; HA: identify anomalies/validity and justify improvements.		